INCH-POUND

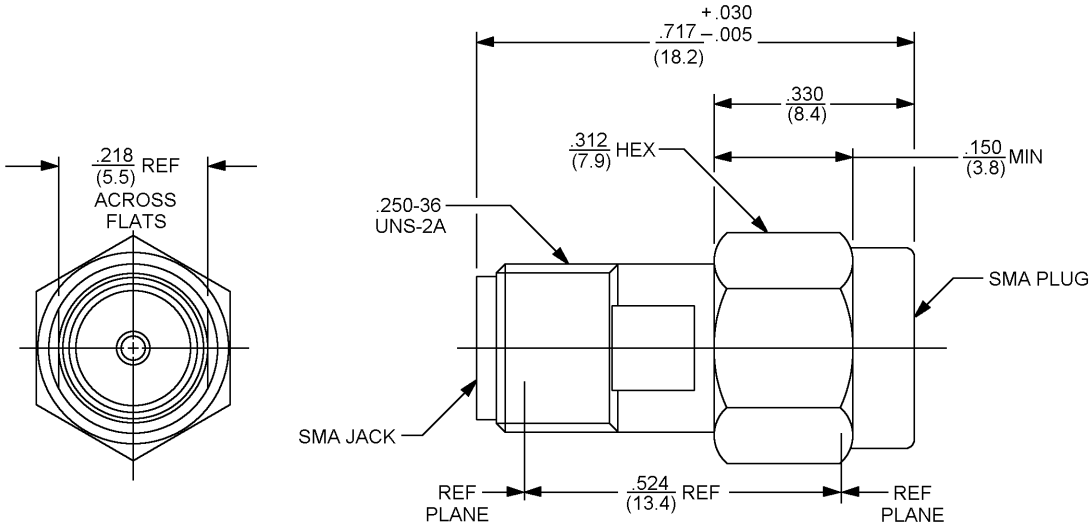
MIL-PRF-55339/55
14 May 2004

PERFORMANCE SPECIFICATION SHEET

ADAPTER, CONNECTORS, ELECTRICAL, COAXIAL,
RADIO FREQUENCY, SERIES SMA, CONNECTOR SAVER

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification sheet and MIL-PRF-55339.



NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Metric equivalents are in parentheses.
4. All tolerances are ±.005 inch unless otherwise specified.
5. Wrench flats are to accommodate standard wrench openings in accordance with FED-STD-H28.
6. All undimensioned pictorials are for reference purposes only.

FIGURE 1. Dimensions and configuration.

ENGINEERING DATA:

Impedance: 50 Ohms

Working voltage:

Sea level: 335 V rms.
70,000 feet: 85 V rms.

Frequency range: 0 to 27 GHz.

Temperature range: -65°C to +165°C.

REQUIREMENTS: Performance for each test of a threaded coupling connector where the test is performed on mated pairs, the pairs shall be torqued to 7 to 10 inch-pounds (0.791 to 1.13 Nm).

Dimensions and configuration: See figure 1 and MIL-STD-348.

Center contact retention;

Axial force: 6 pounds, minimum.
Torque: 4 inch-pounds, minimum.

Force to engage and disengage:

Longitudinal force: Not applicable.
Torque: 2 inch-pounds, maximum.

Coupling proof torque: 15 inch-pounds, minimum.

Mating characteristics: In accordance with MIL-STD-348 except the O.D. of the socket pin (female) shall be 0.047 instead of 0.050.

Permeability: Less than 2.0.

Seal (hermetic, pressurized and waterproof): Not applicable.

Insulation resistance: 5,00 Megohms.

Voltage standing wave ratio (VSWR): 1.05 + 0.005 F (F in GHz) maximum, at 0.5 to 27.0 GHz.

RF leakage (total): -90 dB minimum, minus F (F in GHz).

RF insertion loss: $0.05\sqrt{f(GHZ)}$ dB maximum from 18.0 to 27.0 GHz
$0.03\sqrt{f(GHZ)}$ dB maximum from 0.5 to 18.0 GHz

Durability: 500 cycles minimum at 12 cycles per second, maximum.

Dielectric withstanding voltage: Method 301 of MIL-STD-202.
Test voltage: 1,000 V rms, minimum at sea level.

Contact resistance (in milliohms, maximum):

Contact	Initial	After environmental
Center	4.0	6.0
Outer	2.0	N/A

Vibration, high frequency: Method 204 of MIL-STD-202, test condition D.

Shock, (specified pulse): Method 213 of MIL-STD-202, test condition I.

Thermal shock: Method 107 of MIL-STD-202, test condition C.

Moisture resistance: Method 106 of MIL-STD-202, except vibration shall be omitted.

Insulation resistance: 200 megohms minimum within 5 minutes after removal from humidity.

Corona level: 250 V minimum.
Altitude: 70,000 feet.

RF high potential withstanding voltage:
RF voltage: 670 V rms.
Frequency: 5 MHz.

Salt spray (corrosion): Method 101 of MIL-STD-202, test condition B.

Coupling mechanism retention force: 60 pounds, minimum.

Part or Identifying Number (PIN): M55339/55-30001.

Referenced documents. In addition to MIL-PRF-55339, this document references the following:

MIL-STD-348 FED-STD-H28
MIL-STD-202

CONCLUDING MATERIAL

Custodians:
Army - CR
Navy - EC
Air Force - 11
DLA - CC

Preparing activity:
DLA - CC

(Project 5935-4598-000)

Review activities:
Army - AR, AT, EA, MI
Navy - AS, MC, OS, SH
Air Force - 19, 99

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at http://www.dodssp.daps.mil.